



Investigating the impact of ash dieback

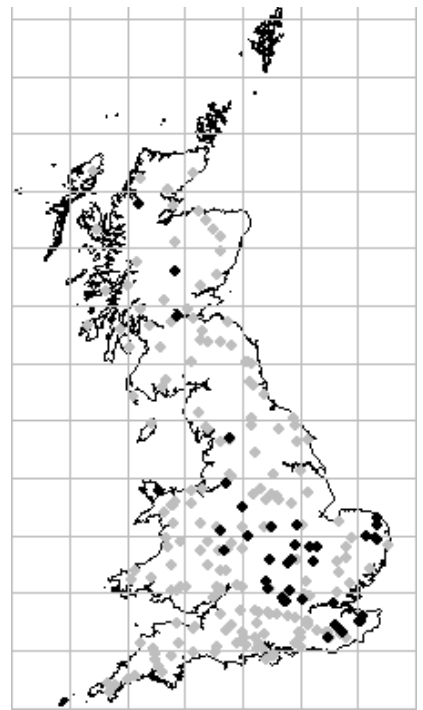
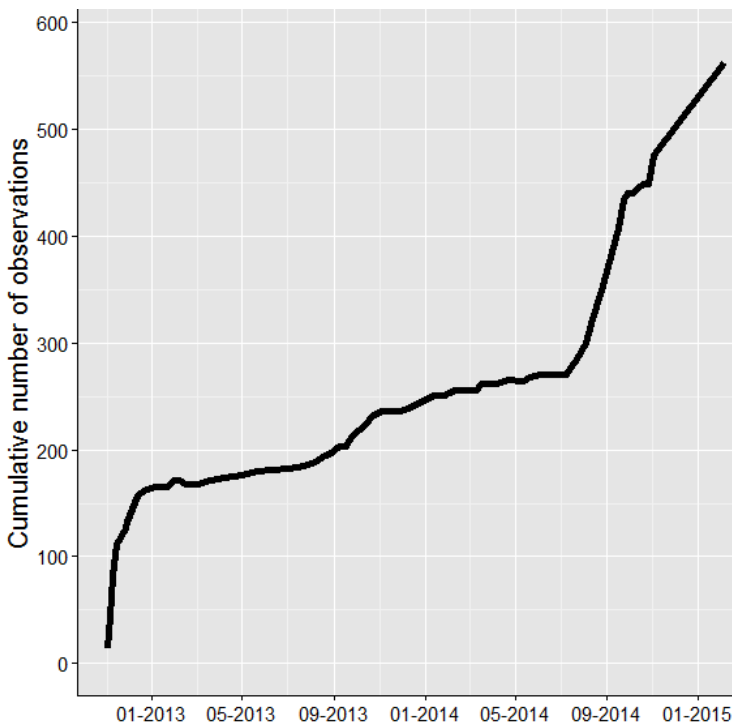
Oli Pescott & Chris Preston provide a short update on the SPLASH project

◁Fig. 2 (left). An ash tree in Lower Wood, Norfolk (TM1397). The main bole is dead, but numerous new shoots are arising from the base; some of these are currently healthy, whilst some are already infected. A. Bolmann-Giolai

Ash dieback (*Hymenoscyphus pseudoalbidus*) is continuing its spread across Britain and Ireland. Forestry Commission data suggest that little ground was gained during 2013, but the spread seems to have picked up again during the latter half of 2014 (Fig. 1). It is difficult to know how much of this particular pattern of spread is real, and how much is due to observer effort, but it certainly appears that ash dieback is well on its way to becoming an established component of the ash-containing habitats of our islands. As members will hopefully know, the BBS is involved in a collaborative project to monitor the impacts of ash dieback on bryophytes, lichens and vascular plants (Pescott & Preston, 2014).

The SPLASH (Survey of Plants and Lichens associated with Ash) baseline survey is intended to be continued until 2016. A project overview, methods, and target areas can all be viewed on the project website: <http://www.brc.ac.uk/splash>. To recap, surveyors are being asked to

record the epiphytic floras of ten ash and ten other deciduous trees within or around surveyor-selected plots (woodland and open habitats can both be surveyed). The aim is to establish sets of trees that can be revisited in years to come to investigate changes that may be associated with ash dieback; both ash trees and other deciduous species are monitored to enable the impacts of the selective loss of mature ash trees to be gauged. Whilst ash dieback is clearly here to stay, it is not currently clear what proportion of trees is likely to actually die as a result of the disease (Rackham, 2014). Evidence from the continent suggests that the amount of tree death varies considerably: one recent study has reported just under 50% of ash trees dying, with less than half of these falling between 2009 and 2013 in an eight hectare patch of Estonian forest (Löhmus & Runnel, 2014). Other possibilities include the reduction of ash to a self-coppicing shrub component of woodlands (O. Pescott, pers. obs.; Fig. 2). Another general motivation for the



△Fig. 1 (left). The cumulative number of confirmed reports of ash dieback observed in the wider environment. Redrawn from a graph produced by Silviculture Research International; data compiled by the Forestry Commission. △Fig. 3 (right). Monads being surveyed for bryophytes (both random and self-selected) are shown in black; grey monads are those random monads for which a surveyor has not yet been found. Self-selected squares can also be surveyed in Ireland.

project is that, given the dramatic improvements in air quality over the last few decades, it is no longer clear exactly how strongly epiphyte diversity is dependent on ash.

We hope that this project provides an interesting opportunity for bryologists to become involved in the monitoring of permanent plots. Whilst the current project does not require the surveyor to visit their plot(s) more than once (being a baseline survey), clearly the collection of systematic data on a particular patch opens up opportunities for personal projects using long-term observations, a type of survey of which there are too few examples (e.g. Rackham, 2006, pp. 512-524). Currently, 39 monads have been adopted for the bryophyte survey element of SPLASH (Fig. 3), but we would be very pleased to hear from more members who are keen to become involved. If our existing random sample of 1×1 km squares does not contain suitable sites in a locale, we would be pleased to receive data from monads that surveyors have self-selected.

Please contact ash-survey@ceh.ac.uk for more information.

Acknowledgments

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References

- Lóhmus, A. & Runnel, K. (2014).** Ash dieback can rapidly eradicate isolated epiphyte populations in production forests: A case study. *Biological Conservation* **169**: 185-188.
- Pescott, O.L. & Preston, C.D. (2014).** Monitoring the impacts of ash dieback on epiphytic bryophytes. *Field Bryology* **111**: 23-25.
- Rackham, O. (2006).** *Woodlands (New Naturalist)*. Harper Collins, London.
- Rackham, O. (2014).** *The Ash Tree*. Little Toller Books, Toller Fratrum, Dorset.

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